

Topic: Ratio and proportion**Question:** Solve for the variable.

$$\frac{3}{4} = \frac{x}{8}$$

Answer choices:

- A $x = 6$
- B $x = 4$
- C $x = 10$
- D $x = 2$



Solution: A

We'll first find the relationship between the denominators, and then we'll use that relationship to find the value of x .

The denominator on the right side is 8, and the denominator on the left side is 4. Since 8 is twice as big as 4, we know that x (the numerator on the right side) must be twice as big as 3 (the numerator on the left side).

$$x = 2(3)$$

$$x = 6$$

Alternatively, we can just cross multiply to get our answer.

$$\frac{3}{4} = \frac{x}{8}$$

$$8 \cdot 3 = 4 \cdot x$$

$$24 = 4x$$

$$\frac{24}{4} = \frac{4x}{4}$$

$$x = 6$$



Topic: Ratio and proportion**Question:** Solve for the variable.

$$\frac{4}{m} = \frac{2}{7}$$

Answer choices:

- A $m = 2$
- B $m = 4$
- C $m = 8$
- D $m = 14$



Solution: D

We'll cross multiply.

$$\frac{4}{m} = \frac{2}{7}$$

$$7(4) = m(2)$$

$$28 = 2m$$

$$\frac{28}{2} = \frac{2m}{2}$$

$$m = 14$$



Topic: Ratio and proportion**Question:** Solve for the variable.

$$\frac{x}{10} = \frac{3}{70}$$

Answer choices:

A $x = \frac{1}{7}$

B $x = \frac{10}{3}$

C $x = 70$

D $x = \frac{3}{7}$



Solution: D

We'll need to find the relationship between the constant denominators, so that we can use that relationship to find a value for x .

The denominator on the left is 10, and the denominator on the right is 70. Since 70 is seven times as big as 10, we know that 3 must be seven times as big as x .

$$7x = 3$$

$$x = \frac{3}{7}$$

Alternatively, we can just cross multiply to get our answer.

$$\frac{x}{10} = \frac{3}{70}$$

$$70 \cdot x = 3 \cdot 10$$

$$70x = 30$$

$$x = \frac{30}{70}$$

$$x = \frac{3}{7}$$

